CLAIMS

I Claim:

1. A coolant subsystem for a grinding tool having a spindle and a grinding surface, comprising:

a nozzle adapted to supply a coolant material;

an arm coupled to said nozzle and to said grinding tool and adapted to allow placement of said nozzle in multiple positions, each of said positions being substantially tangent to the grinding surface of the grinding tool;

a motor connected to said arm and adapted to move said nozzle through each of said postions; and

a controller coupled to said motor and adapted to control the movement of said nozzle to supply the coolant material based upon a location of a part relative the grinding tool.

2. The coolant subsystem of Claim 1, wherein said nozzle is adapted to supply the coolant material at the substantially same velocity as the grinding surface of the grinding tool.

3. The coolant subsystem of Claim 1, wherein said arm is coupled to the spindle of the grinding tool.

4. The coolant subsystem of Claim 3, wherein said nozzle pivots and the grinding tool rotates about the same axis.

5. The coolant subsystem of Claim 3, further comprising a bearing collar coupled around the spindle of the grinding tool and to said arm.

6. The coolant subsystem of Claim 1, wherein said arm is adapted to allow placement of said nozzle along an arcuate path.

7. The coolant subsystem of Claim 1, further comprising a belt coupled to said arm and to said motor and adapted to translate rotation of said motor into movement of said arm.

8. The coolant subsystem of Claim 1, wherein said controller is a computer numeric control (CNC) device.

9. The coolant subsystem of Claim 1, wherein said CNC device is further adapted to control the location of the part.

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10. A grinding system comprising:

a grinding tool having a grinding surface adapted to grind a part;

a spindle connected to said grinding tool;

a first motor coupled to said spindle and adapted to rotate said spindle and said grinding tool;

a nozzle adapted to supply a coolant material;

an arm coupled to said nozzle and to said grinding tool and adapted to allow placement of said nozzle in multiple positions, each of said positions being substantially tangent to said grinding surface of said grinding tool;

a second motor connected to said arm and adapted to move said nozzle through each of said positions; and

a controller coupled to said second motor and adapted to control the movement of said nozzle to supply the coolant material based upon a location of the part relative said grinding tool.

11. The grinding system of Claim 10, wherein said nozzle is adapted to supply the coolant material at the substantially same velocity as the grinding surface of the grinding tool.

12. The grinding system of Claim 10, wherein said arm is coupled to the spindle of the grinding tool.

13. The grinding system of Claim 11, wherein said nozzle pivots and the grinding tool rotates about the same axis.

14. The grinding system of Claim 11, further comprising a bearing collar coupled around the spindle of the grinding tool and to said arm.

15. The grinding system of Claim 10, wherein said arm is adapted to allow placement of said nozzle along an arcuate path.

16. The grinding system of Claim 10, further comprising a belt coupled to said arm and to said motor and adapted to translate rotation of said motor into movement of said arm.

17. The grinding system of Claim 10, wherein said controller is a computer numeric control (CNC) device.

18. The grinding system of Claim 1, wherein said CNC device is further adapted to control the location of the part.

19. A method of supplying coolant material for a grinding tool having a spindle and a grinding surface, comprising:

providing a nozzle adapted to supply a coolant material; and

moving the nozzle through multiple positions, each of the positions being substantially tangent to the grinding surface of the grinding tool, based upon a location of a part relative the grinding tool.

20. The method of Claim 19, further comprising supplying coolant material at the substantially same velocity as the grinding surface of the grinding tool.

21. The method of Claim 19, wherein said moving includes moving the nozzle along an arcuate path.